

Aluminium composite panel

Reynobond® Architecture

References

STANDARD: Plain colours, Metallic ...	DESIGN Wood Design: Mahogany, Oak, Zebrano ...
NATURAL Design: Terracotta, Aciero Corten, Granite ...	MINERALS Design: Concrete, Lime, Stone, Slate ...
EFFECTS: Sparkling, Anodized, Chameleon ...	BRUSHED Look

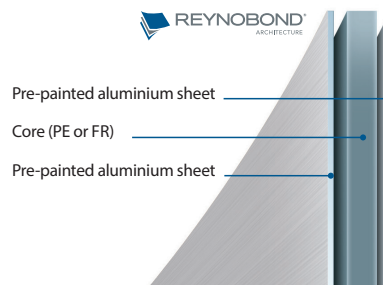


Main features

Reynobond® Architecture: two Reynolux® aluminium sheets bonded to a thermoplastic core material (PE or FR). It offers an extraordinary bond integrity and offer an outstanding corrosion resistance. The advantages are particularly obvious for large area applications, which place exceptionally high demands on evenness and stiffness.

Applications

Reynobond® Architecture panels is especially developed for outdoor and indoor applications such as ventilated facades, designing facades or wall cladding, both in the area of new buildings as well as refurbishments. Reynobond® Architecture panels can be installed in different cassette systems, screwed or riveted systems. Learn more at www.reynobond.eu.



Qualification of manufacturers and installers

For the transformation and installation of Reynobond® aluminium composite panels refer to standard aluminium fabrication guidelines.

Cladding manufacturer should be qualified by Arconic Architectural Products. Aluminium composite cladding should be installed by a fabricator / installer authorized by the principal manufacturer. The fabricator / installer shall have a minimum experience of 5 years in successful installation of composite cladding. The installation team should have sufficient experience in cladding installation. Contractor shall submit 10 years work guarantee from date of handing over.

Cleaning

Frequent and regular cleaning, at least once a year, is strongly recommended or when the appearance has become unsightly or when deposits of atmospheric pollution or matter washed down from building surfaces are apparent. Regular cleaning of organic coatings will maintain the surface in a satisfactory state.

- Washing operations have to be carried out progressively from top to bottom. Wipe along the polishing direction, not across it. Work from top to bottom in overlapping strokes.
- Cleaning agent depends on the site location and on the degree of contamination. Only water based mild cleaning agents should be used for cleaning organic coated flat products. The manufacturer advice should be sought in other cleaning agents especially solvents. Do not use swimming pool water for cleaning. Do not use chlorine containing cleaning agents such as bleach or strong acids (e.g. mortar removers).
- Harsh scrubbing or the use of abrasive or solvent cleaners, which will change the finish, should be avoided. Do not use wire wool or hand objects to remove stubborn stains.
- Rinse away cleaning chemicals with liberal amounts of tap water. Wipe dry, if possible.

TECHNICAL DATASHEET

Composition Reynobond® aluminium composite panel			
Thickness	3 mm	4 mm	6 mm
Coated aluminium sheet thickness	0.5 mm		
Core	PE or FR (fire-retardant)		
Front side finish*	DURAGLOSS® 5000 (35 µm) or PVDF 70 / 30 (25 µm) and anti-corrosion treatment		
Reverse side finish	Washcoat and anti-corrosion treatment		

Characteristics Reynobond® aluminium composite panel			
Width	1,000 mm / 1,250 mm / 1,500 mm / 1,750 mm / 2,000 mm (-0/+3 mm)		
Length	2,000 mm up to 6,050 mm (< 4 m: -0/+3 mm; > 4 m: -0/+6 mm)		
Weight in FR	6.0 kg / m ²	7.6 kg / m ²	10.8 kg / m ²
Weight in PE	4.7 kg / m ²	5.6 kg / m ²	7.5 kg / m ²
Tolerance in squareness	≤ 3 mm		
Tolerance in bow	≤ 2 mm / 500 mm on the width and the length		

Performance Reynobond® aluminium composite panel			
Bond integrity	PE: ASTM D1876 FR: ASTM D903	PE: 4.37 N / mm (mini) or 25 pli (mini) FR: 6.99 N / mm (mini) or 40 pli (mini)	
Moment of inertia (I)		0.16 cm ⁴ / m	0.31 cm ⁴ / m
Stiffness (EI)	CSTB, DIBT	0.125 kN.m ² / m	0.242 kN.m ² / m
Surface coefficient of heat transfer U		5.7 W / m ² K	5.4 W / m ² K
Thermal expansion		2.4 mm / m for a temperature variation of 100 °C	
Sound attenuation (R _w)	ASTM E90, ASTM D6 38 – 82a	25 dB	26 dB
Temperature resistance		-40 °C / +80 °C	
Maximum allowable deflection		L / 30 (allows higher wind pressure or bigger sized elements)	

Performance and durability Reynolux® pre-painted aluminium sheet		
Specular gloss *	EN 13523 – 2 ASTM D 523	DURAGLOSS® 5000: from 3 % to 80 % PVDF 70/30: from 25 % to 30 %
Durability class	NF EN 1396	Class 4: severe industrial – extreme conditions / very severe coastal marine (less than 3,000 m from the sea) / high UV plus severe conditions
Pencil hardness	EN 13523 – 4	HB – F
Resistance to cracking on rapid deformation	EN 13523 – 5	No cracking, no loss of adhesion
Adhesion after indentation	EN 13523 – 6	100 % of adhesion
Resistance to cracking on bending	EN 13523 – 7	Very good flexibility: 0.5T
Acetic salt spray fog resistance	EN 13523 – 8	1,000 h
Water immersion resistance	EN 13523 – 9, AAMA 620	3,000 h
Humidity resistance	ASTM D 224, AAMA 620	3,000 h
Mortar test	AAMA 620	No effect
Acid resistance	AAMA 620 ASTM D 1308	Nitric acid: ΔE < 5 units except some blue and metallic colours; hydrochloric acid: no effect
Detergent resistance	AAMA 620	No effect
Colour fastness on natural weathering	5 years 45° South Florida	Colour variation: 5 to 10 units (ΔE) depending on colour
Resistance to chalking on natural weathering	5 years 45° South Florida	Rating ≥ 8

Fire certificates for Reynobond® aluminium composite panel		
Europe	EN 13501	FR: B-s1 , d0
France	NF P 92-501	PE & FR: M1 Combustible; non-inflammable
Germany	DIN 4102	PE: B2 – FR: B1
Switzerland	Directive VKF	PE: 4.2 – FR 5.3
Great Britain	BS476 part 6 & 7	PE & FR: class 0
Poland	PN-90 / B-02867	FR: NRO
USA	ASTM E 84	Meets requirements
Austria	ÖNORM 3800	FR: PASS
Russia	TR	FR: G1

Performance Reynolux® aluminium sheet	
Tensile strength R _m	165 - 240 MPa according to alloy, temper and width
Yield strength R _{p0.2}	140 - 160 MPa according to alloy, temper and width
Elongation A _{50mm}	2% (mini)

* This document provides the results for two-sided PVDF.
The technical data refer to currently available products. Please notice that the specific characteristics of each project have to be taken into account (country, delivery time, size of transport containers etc.).

Technical service:

Our service is at your disposal to help with static wind resistance calculations, panel cutting optimisation and advice in the details of installation on specific parts of the building.

CAD files and 3D objects:

You can find all the CAD system files for riveted and screwed installation as 3D objects in electronic form on our website at www.reynobond.eu.



Reynolux® EN 15088
0036-CPR-M-081-2014



Arconic Architectural Products

2, rue Marie Curie

68500 Merxheim, France

Tel. +33 (0) 3 89 74 46 00

Reynobond.Service@arconic.com

www.arconicarchitecturalproducts.eu